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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,775	12/30/2003	Christopher Cave	I-2-0564.1US	8211

24374 7590 06/26/2007

VOLPE AND KOENIG, P.C.
DEPT. ICC
UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER	
MOUTAOUAKIL, MOUNIR	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
06/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,775	CAVE ET AL.	
	Examiner	Art Unit	
	Mounir Moutaouakil	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/30/2003* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 24 is rejected under 35 U.S.C. 102(e) as being anticipated by Willars (US 6,597,679).

Regarding claim 24, Willars discloses a method for determining a type of handover in a wireless communication system, the method comprises performing measurements on a plurality of cells/sectors; using the measurements, determining whether soft/softer handover should be performed using a threshold test; and if the determination is not to perform soft/softer handover, using the measurements, determining whether hard handover should be performed using a threshold test (see column 2, lines 17-25. the mobile radio measurements are also utilized to evaluate soft, softer and hard handover).

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadgama (US 2003/0083069). in view of Bottomley (US 6,473,602).

Regarding claim 1, Vadgama discloses a method for soft/softer handover in a wireless hybrid time division/code division multiple access communication system (see page 12 paragraph [0167]. The system uses a hybrid TDMA/CDMA), the method comprising for a wireless transmit/receive unit (WTRU) (See figure 1, MU). The WTRU is able to determine the currently used uplink and downlink timeslots of the WTRU in a current cell/sector (see page 5, paragraph 0073, data is transmitted between he base station and the mobile unit); and after initiating soft handover, communicating same uplink and downlink data with the current cell/sector using the currently used uplink and

downlink timeslots (see page 5, paragraph 0077. during or after the soft handover, the mobile terminal maintains the same uplink/downlink data with the current cell).

Vadgama discloses all the limitations of claim 1 with the exception of assigning uplink and downlink timeslots to the WTRU for a handover cell/sector, before and after soft handover, the assigned handover cell/sector uplink and downlink timeslots are different timeslots than the currently used current cell/sector uplink and downlink timeslots. However, Bottomley discloses a mobile assisted handoff radiocommunication system. The system assigns a downlink and uplink time slots, different from the current data uplink and downlink time slots (see column 1 line 62-column 2 line 16, handover measurements are communicated via a control channel). Thus, it would have obvious to the person of ordinary skill in the art at the time of the invention to implement the method of assigning uplink and downlink timeslots to the mobile terminal for handover, different from the data uplink downlink time slots, as taught by Bottomley, into the handover communication system of Vadgama. The motivation for assigning a different uplink and downlink to the mobile unit for a handover being that it will make section/cell handover more feasible and efficient.

Regarding claim 2. Vadgama discloses all the limitations of claim 1.

Vadgama does not disclose the assigning handover cell/sector uplink and downlink timeslots to the WTRU is only to timeslots having a same direction as timeslots in the current cell/sector. However, ~~However,~~ Bottomley discloses a mobile assisted handoff radiocommunication system. The system assigns handover cell/sector downlink and uplink time slots to the mobile unit having the same direction as timeslots

in the current cell/sector (see column 1 line 62-column 2 line 16, handover measurements are communicated via a control channel). Thus, it would have been obvious to the person of ordinary skill in the art at the time of invention to implement the method of assigning handover cell/section handover uplink/downlink timeslots for the mobile unit having the same direction as timeslots in the current cell/sector, as taught by Bottomley, into the handover communication system of Vadgama. The motivation for assigning handover cell/sector uplink and downlink timeslots to the WTRU is only to timeslots having a same direction as timeslots in the current cell/sector being that it will make section/cell handover more feasible and efficient.

Regarding claims 3, 7 and 16. Vadgama discloses a method wherein the uplink and downlink data is decoded using a joint detector configured to only process signals sent by a same scrambling code (see figure 9, elements 268 and 270).

Regarding claim 4. Vadgama discloses a method, which further comprises one set of the same uplink data having a highest received signal quality received by each cell/sector being selected as decoded uplink data (see page 2, paragraph 2. the cell with the highest signal quality is chosen as decoded uplink data).

Regarding claims 5, 9 and 18. Vadgama discloses a method, which further comprises combining both sets of the same downlink data as decoded downlink data (see figure 8, element 242. the system comprises a downlink data combiner/selector).

Regarding claims 8 and 17. Vadgama discloses a method where the WTRU further comprising a buffer for storing the detected received downlink data for the first and handover cell/sector (see paragraphs167 and 168. the mobile unit receives

handover information and data. inherently, the mobile unit must have a buffer or a memory to store and process the received data and handover information).

Regarding claims 10 and 19. Vadgama discloses a handover method wherein a transmission power level of the first cell/sector transmitted uplink data is based on a received signal power level (RSCP) of a channel transmitted by the first cell/sector and a transmission power level of the handover cell/sector transmitted uplink data is based on a RSCP of a channel transmitted by the second cell/sector (See paragraphs 76-78. the mobile unit is in communication with two ore more base stations where the strengths of the various signals are taken into account).

Regarding claims 11 and 20. Vadgama discloses a WTRU wherein the RSCP of the first and handover cell/sector channels are determined in a same radio frame (see paragraph 73).

Regarding claim 12 and 21. Vadgama discloses all the limitations of the subject matter of claims 6 and 15.

Vadgama does not disclose that the first and handover cell/sector channels are not in a same radio frame. However, Bottomley discloses a mobile assisted handoff radiocommunication system. The system assigns a downlink and uplink time slots, different from the current data uplink and downlink time slots (see column 1 line 62-column 2 line 16, handover measurements are communicated via a control channel). Thus, it would have obvious to the person of ordinary skill in the art at the time of the invention to implement the method of assigning uplink and downlink timeslots to the mobile terminal for handover, different from the data uplink downlink time slots, as

taught by Bottomley, into the handover communication system of Vadgama. The motivation for assigning a different uplink and downlink to the mobile unit for a handover being that it will make section/cell handover more feasible and efficient.

Regarding claims 13 and 22. Vadgama discloses a WTRU wherein a transmission power level of the first cell/sector uplink communication is based on a pathloss of a channel transmitted by the first cell/sector and a transmission power level of the handover cell/sector is based on an offset of the first cell/sector pathloss (see paragraph 105, the strength of the signal quality is influenced by the path used by first and handover signals).

Regarding claims 14 and 22. Vadgama discloses a WTRU where the offset is updated periodically (see paragraph 108. the control signals are updated periodically).

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willars in view of Vadgama.

Willars determines whether soft/softer handover should be performed.

Willard does not include, if the measurements exceed a threshold, comparing a cell loading/cell congestion metric to a soft/softer handover gain metric to determine whether soft/softer handover should be performed. However, Vadgama discloses a cell selection system. The cell selection system allows wireless devices to select the cell/section with the lowest congestion (paragraph [0083]). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the cell selection system based on cell/sector congestion, as taught by Vadgama, into

the handover in cellular communication system of Willars for the purpose of enhancing cell/sector handover.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mounir Moutaouakil whose telephone number is 571-270-1416. The examiner can normally be reached on Monday-Thursday (4pm-4: 30pm) eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mounir Moutaouakil
Art Unit: 2616

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600